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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/549,280

09/13/2005

Tomas Rosin

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23117 7590 10/27/2009  
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EXAMINER

GOLIGHTLY, ERIC WAYNE

ART UNIT

PAPER NUMBER

1792

MAIL DATE

DELIVERY MODE

10/27/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/549,280	<b>Applicant(s)</b> ROSIN, TOMAS	
	<b>Examiner</b> Eric Golightly	<b>Art Unit</b> 1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 21-41 is/are pending in the application.
- 4a) Of the above claim(s) 27 and 29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-26, 28 and 30-41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/21/2009 has been entered.

2. Claims 21-41 are pending. Claims 27 and 29 are withdrawn.

### ***Claim Objections***

3. Claims 21, 38 and 39 are objected to because of the following informalities:

Regarding claim 21, the word "the" in line 3 has two brackets to its left and one bracket to its right.

Claims 38 and 39 have the status identifier "currently amended" and underlined text. Since these amendments were previously made, the status identifier should be "previously presented" and there should be no underlined text.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 21-26, 28 and 30-36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claim 21 recites the limitation "the ... sequentially released particles" in lines 12 and 13. There is insufficient antecedent basis for this limitation in the claim. It appears that the intended meaning may be "the ... sequentially entrained particles", as discussed with Bryan H. Davidson in a phone conversation on 10/21/2009, wherein it was agreed that the indefiniteness issue could be resolved by changing the phrase "the respective sequentially released particles entrained" in lines 12 and 13 to "the respective particles sequentially entrained".

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claims 37-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,996,951 to Archer et al. (hereinafter "Archer") in view of US 5,591,895 to Rigby (hereinafter "Rigby") and in further view of US 6,325,025 to Perrone (hereinafter "Perrone").

10. Regarding claims 37 and 40, Archer teaches a system for cleaning heat exchange surfaces of a heat exchange system (abstract), comprising: cleaning equipment comprising a soot blower (Fig. 5, ref. 4 and col. 7, line 55), which is fully capable of being arranged to sequentially clean differently located parts of the heat exchange surfaces, so as to release sequentially particles from the respective differently located parts of the heat exchange surfaces cleaned by the cleaning equipment (col. 7, lines 44-47 and col. 8, lines 25-30).

Archer does not explicitly teach a means for measuring the amount and/or type of sequentially released particles and a means for linking together and storing in electronic memory location information on parts of the heat exchange surface and particle measurement data. Rigby teaches a system for detecting particles in a gas flow

(abstract), including a means for measuring the amount and/or type of sequentially released particles in the exhaust gas stream (Fig. 1, especially ref. 1, Fig. 2, especially ref. 6, 8 and 9, and col. 3, lines 17-55). It would have been obvious to one of ordinary skill in the art at the time of the invention to include a means for measuring the amount and/or type of sequentially released particles in the exhaust gas stream as per the system of the Rigby teaching in the system as per the Archer teaching in order to enhance the particle removal process control, since it is known that combustion gases contain particles which form undesirable deposits (Archer at col. 1, lines 23-40). The system as per the Archer/Rigby teachings is fully capable of being used to create particle measurement data related to respective different locations of the differently located parts cleaned sequentially by the cleaning equipment.

Archer and Rigby do not explicitly teach a means for linking together and storing in electronic memory location information on the respective differently located parts of the heat exchange surfaces and particle measurement data. Perrone teaches a sootblowing optimization system (abstract) and discloses a means for linking together and storing in an electronic memory comprising a processor and database (col. 3, lines 54-64). It would have been obvious to one of ordinary skill in the art at the time of the invention to include a means for linking together and storing in an electronic memory as per the system of the Perrone teaching in the system as per the Archer/Rigby teachings since databases are known, widely available, and convenient for storing operating parameters or other data. The means for linking together and storing in an electronic memory as per the system of the Archer/Rigby/Perrone teachings is fully capable of

being used to link together and store location information of the respective differently located parts of the heat exchange surfaces being cleaned by the cleaning equipment and the particle measurement data created during the cleaning of the respective differently located parts of the heat exchange surfaces so as to create fouling information related to fouling on the respective differently located parts of the heat exchange surfaces.

Regarding claim 38, Archer, Rigby and Perrone disclose a means for detecting an operation parameter status of the cleaning equipment (Archer at Fig. 3, ref. 4 and 10 and col. 7, line 54-57 and col. 8, lines 10-14).

Regarding claim 39, Archer, Rigby and Perrone disclose a means for controlling the cleaning equipment on the basis of the information of the fouling on the heat exchange surfaces (Archer at Fig. 3, ref. 4 and 10 and col. 7, line 54-57 and col. 8, lines 10-14).

Regarding claim 41, Archer, Rigby and Perrone disclose the system wherein the cleaning equipment comprises a steam based soot blower (Archer at col. 1, 41-45), which is a mechanical cleaner.

### ***Allowable Subject Matter***

11. Claims 21-26, 28 and 30-36 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

12. The following is a statement of reasons for the indication of allowable subject matter: The closest prior art references are Archer (US 4,996,951), Rigby (US 5,591,895) and Perrone (US 6,325,025). The prior art references of record, taken alone or in combination, do not anticipate or suggest fairly the limitations of: performing a cleaning cycle on heat exchange surfaces by cleaning sequentially differently located parts of the heat exchange surfaces, measuring the amount and/or type of released particles entrained in an exhaust gas stream so as to create particle measurement data associated with each of the respective differently located parts and linking together and storing into an electronic memory location information of the respective differently located parts and the respective particle data measurement data created during the cleaning cycle, in combination with the other step elements of the cleaning method as instantly recited.

### ***Conclusion***

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Golightly whose telephone number is (571) 270-3715. The examiner can normally be reached on Monday to Thursday, 7:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Kornakov can be reached on (571) 272-1303. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

EWG

/Michael Kornakov/

Supervisory Patent Examiner, Art Unit 1792